Application # 09/517,258

Applicant Kent Desilotel

Art # 1725

Examiner Zinia Pittman

4207 Fitzgerald Street
Addis LA. 70710

Distinctly claimes of subject matter which the applicant regards as his invention is

Claimes #1(d) #2 #3 #4 #5 #7 #8 #9(d) #10 #11 #12 #14 #15 #16(c) #17 #18 #19 #21 #22 #23(c) #24 #25 #26 #28 #29 #30(d) #31 #32 #33 #34 #36 #37 #38(d) #39 #40 #42 #43 #44(a)(b)(c) #45 #46 #48 #49 #50 #51(e)(f) #52 #53 #55 #56 #57(e)(f) #58 #59 #61 #62 #63 #65 #67 #68

Question #1 from Examiner
With regards to claims 1, 9, 30, and 63 the limitation requiring "said pressure applicators configured to extend behind said sourse of electric current" is indefinite.
The soure of electric current or welding tourch is positioned 1" inch behind the first contacting point of pressure applicators roller to plate and exstends 36" inches beyaand the

Last sourse of electric current or welding tourch. Deppending on widing prosses required for job b.

Question #2

~~Does~~ It is unclear to the examiner the exact positioning of the pressure applicators with reference to the source of the electric current. "Rose behind said source of electric current refer to the same plane as the source of electric current or a different plane? Most welding processes with higd weld yealed products uses welding torches. The disstance bettween the torch and plate to be welded is eridical to proper welding procedure filler wire is feed trew the torch to the plate being welded and an arc is creatted when the wire tuches the plate. This distance veryies with different thickness of plate materal. On thin plate the distance may be deffereht from the bottom of the torch to the top of plate then it would be for thick plate. Also for thick plate for full pennitration of plate with the weld the edges of the plate a beveled with

top edge open and the bottom edge close to each other so the arc would be Lewwer than the top edge of plate. More than on welding pass is required on thick plate in some instacces to fill the beveled edges to the top surface of the plate
This distace of torch and plate relation ship can be achevied by using the contacting point on the rollers on the pressure applicators to the plate and adjusting the bottom of the welding torch up or down to the proper distance. So the contacting surfac of the pressure applicators and sourse of electric current are held at deffert plaines according to proper welding prosses all thow it may be the same plane in some ~~st~~ instasses

Claim Rejection

Being sited with Zuan et al (wo 98/06505). restraining means by applying flattening forces with a pair of fingers is doing ~~the~~ about the same thing as my inventon but it limmits the space around the welding machine area witch Limit product movement and slows productirity witch is castly to manufactures Figures 14-16 this pair of ~~plamar workpieces~~ roller support members are in a fixed position and the work pieses must be guide threw it witch limitts the shapes af plate and sizes of plate being welded to gether. Some companies bend plate at differnt angles before welding them to gether ~~with~~ witch would make this apparatice mone usei ble.

I hope you can see the bennfits my invetion will have to the construction of may and diffacult task and it mobility

to do job eney whare with
easa. I hope I have cleared
or answard your question clearly.
If you have any questions
please call me. my phone
is area code 225-687-9103

Thanks Kent J Deshotel

date 10-5-2002

P.S. I sent a copy of my
first draft of my invention
so it may be of some
help to you.

Tank you very much

my addres is 4207 Fitzgerald st
Addis La 70710

Description of invention

1. Describe the concept of my invention:
To hold two edges of plate steel firmly and level against a flux coated copper backing bar so that a fully penitiated weld (Top and bottom of plate steel) can be without defects, spillage of weld on the bottom side and sagging (under cut) of weld on the top side of plate steel due to a lack of sound presure between the two plate steel edgesurfaces and the flux coated copper backing bar.
2. How dose it work?
Two sets of rollers mounted side by side, level in all directions, and in line with a gantry which is in line with a welding bed. An equal space is held between the front and back of rollers to allow a welding process to take place between the rollers. The roller assembly and welding torches are mounted on the same lifting leg of a trolley assembly which travels the length of the gantry. The welding bed is made up of two side walls that have wear bars mounted on top of them. The wear bars are wider than the side walls and are mounted on top and

frame in the outer side of the sides, which
recives a overhang of the wear bar on the inside
of the bed, which catches the channel that
the copper backing bar rest on, that is pushed
up by an air bag. The roller assembly rollers
are set vertically approximently 1/4" wider than
the outer sides of the welding bed, leaving
the rest of the rollers to extend inward
towards the weld seam sight. This keeping
weld edges level and firmly in contact
with the flux coated copper backing bar.
The welding bed has magnets along the
outer sides of the welding bed mounted
level with the top of the wear bars. The mag-
nets are mounted on hydraic rams that
able them to move up to the bottom of
plate steel, magnetize, and pull the plate steel
down to the wear bars height. The roller ass-
mbly will be pushed down from above by an
air ram that raises and Lowers the trolley
lifting leg. The roller assembly will come down
from above the two steel plates and push them
down to the wear bars, and by the width of
the rollers extend inward toward the weld.
seam sight the rollers will insure the plate steel

copper backing bar. The tricley assembly will be set to move forward at a desired speed for welding. The weld is made while the roller assembly holds the two steel plates down level long enough so that the weld puddle has time to cool and harden as it moves toward the end of the weld seam.

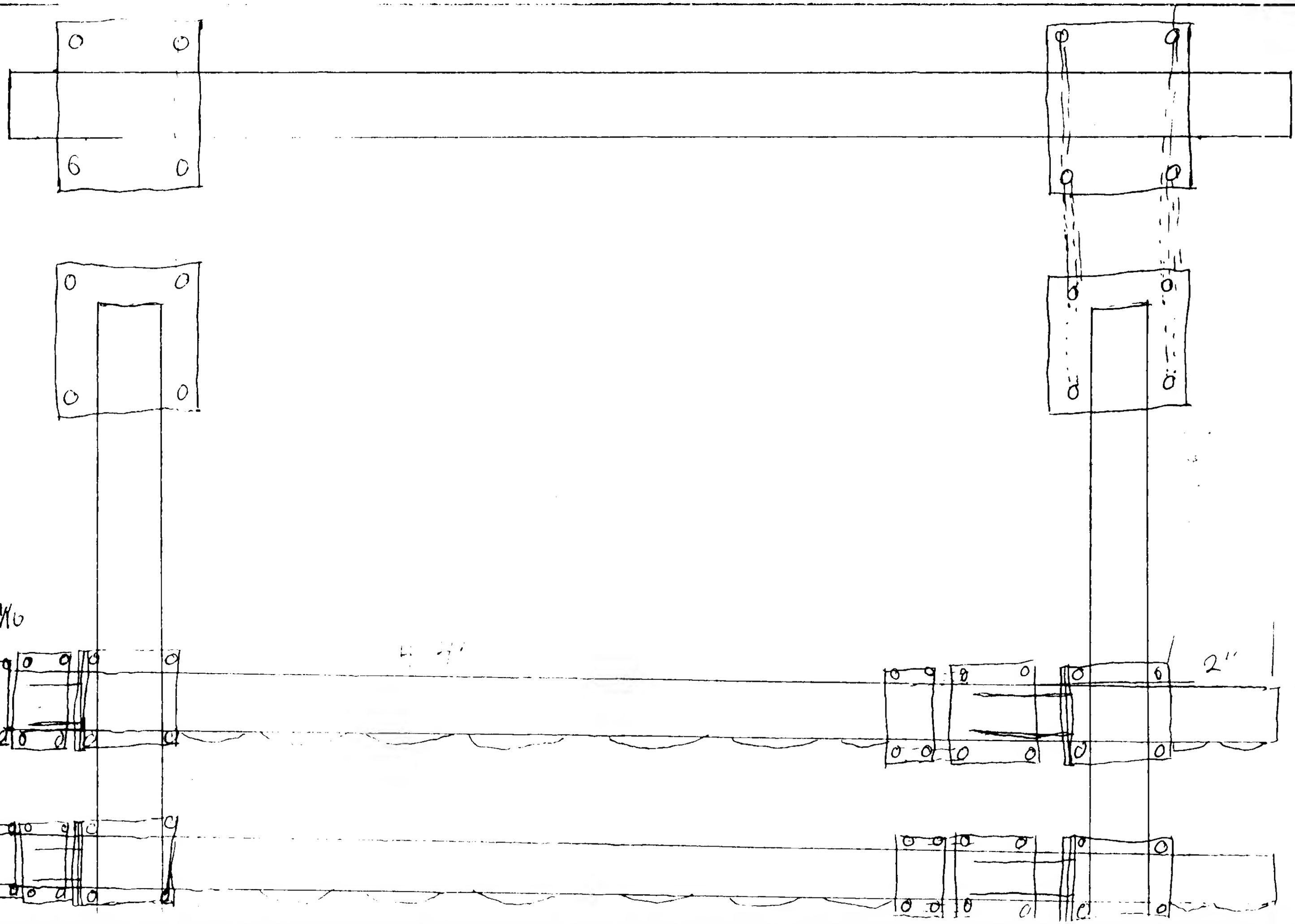
3. What problem(s) dose it solve?

The fully penitrated one sided welding processhas no probleims of preformance when the plate steel is in perfect flateness and straightness. The probleims begin when the plate steel is not perfectly straight and flat. The magnets hold these unstraight steel plates down against the wear bars of the welding bed at a distance of about 9" between the magnets, as the two steel plates meet, if one plate is straight and the other plate is unstraight, there will be a uneven union of the two edges of plates, causing a (High/Low) effect. Also the steel plate from that point on is left up too it's own integrete to hold itself in place. The flux coated copper backing bar is lifted up by a airbag, it comes up against the two uneven surfaces forming a good seal on the Lower steelplate and a bad or lose seal on the Higher steel plate witch

causes the weld to spill off to the side that there is a bad seal on the bottom side of the plates, it also leaves the weld on top of the steel plates sagging or undercut below the steels plate surface. These defects have to be repired ether by reruning the welding machine over the low spot or welding the Low spot by hand on the top side of plates only. The under side of the steel plates where the weld spilles off to the side has to be gaudged off and rewelded by hand. Also when welding three or more steel plates side by side together, one weld is made at a time. After the first weld has been made and the seccnd weld is being made, the edge of the plate that the first weld was made on tends to buckle up due to cooling and drawing of metal from the first weld causeing a (High/Low) effect also.

The introduction of my roller assembly method to this fully penitrating one sided welding machine will solve the perfomance problems this machine has with imperfect steel plate surfaces. This will save companies a great deal of time and money that results from rework and repair of defective welds. Inventor Kent Kuehl

6-30-99


2"

← Travel

filler wire

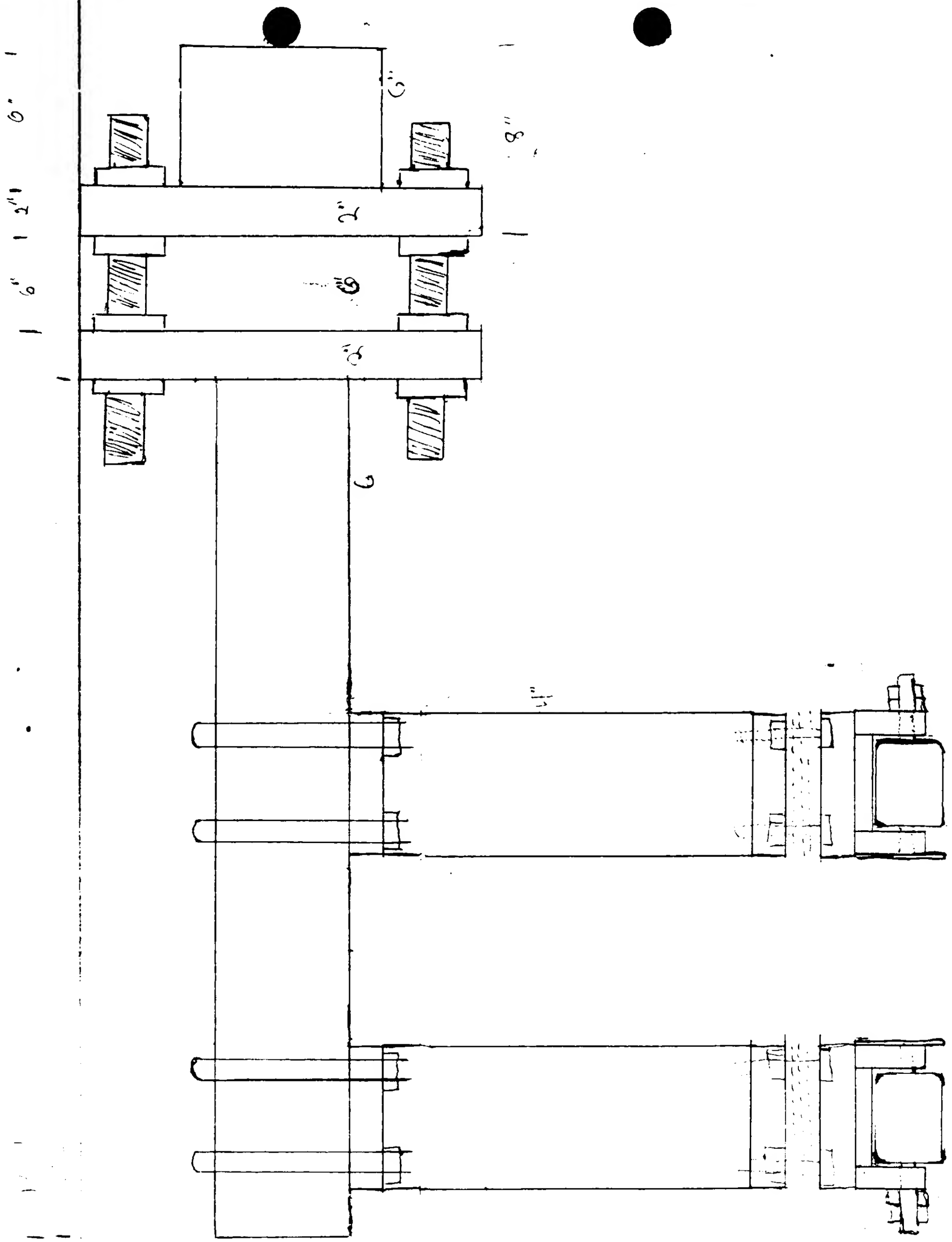
welding Torches

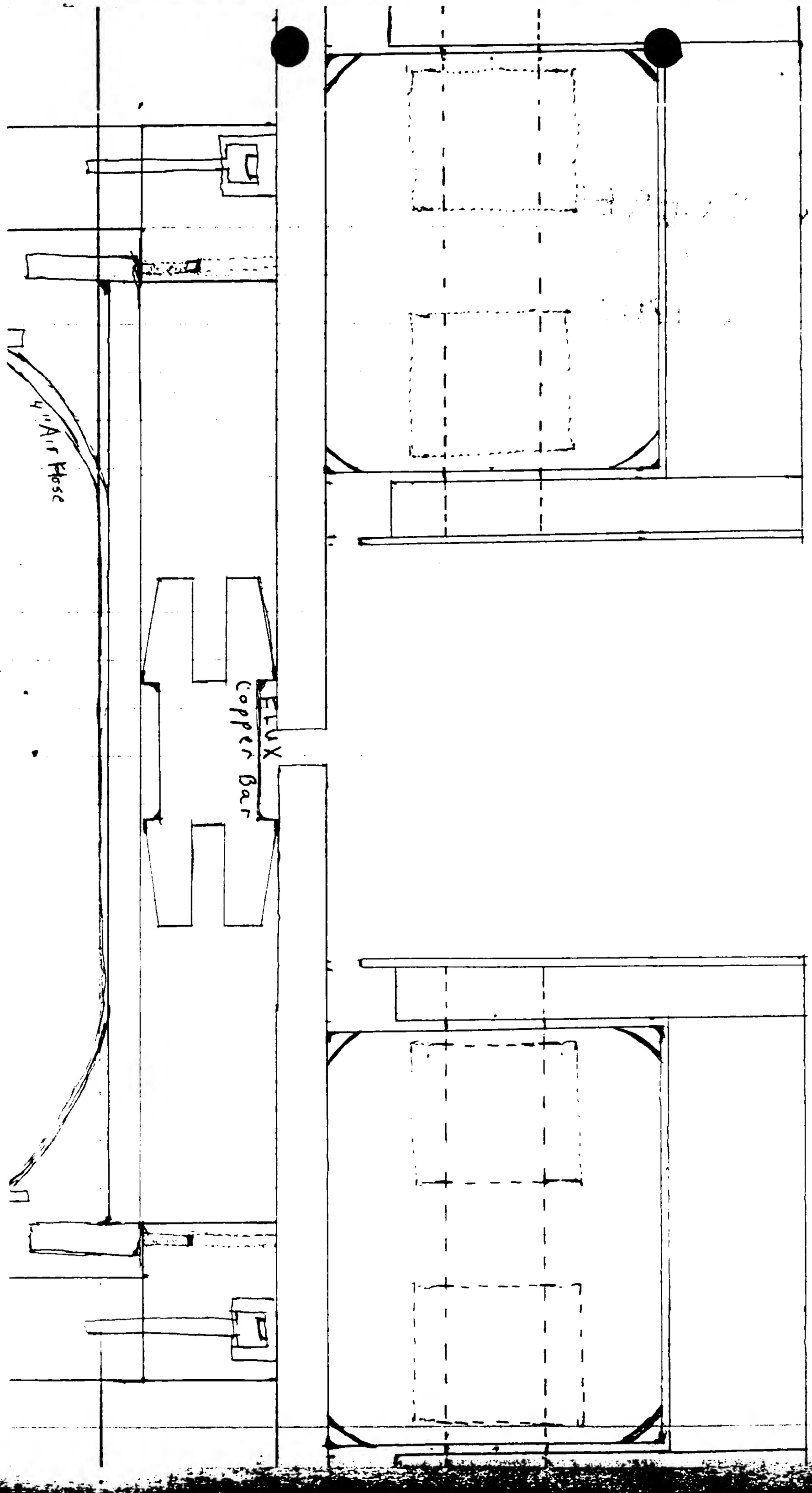
3/4" x 1/4" x 1/2" Sealed Bearings

3/4" ID x 1 1/4" OD x 1" with Sealed Pinn Barrings

arc

Plate Surface top Bottom




4" Air Hose
FLUX
Copper Bar